

REMARKS

Claims 1, 2, and 5-8 have been amended in the application. Claims 1-10 are presented for reconsideration and further examination in view of the following remarks.

In the outstanding Office Action claims 1-10 were rejected under 35 U.S.C. § 112, 2nd paragraphs as being indefinite; and due to the uncertain nature of the claimed invention, no art was applied to determine the allowability of the claims; however, the Examiner made specific mention of U.S. Patent Nos. 6,215,750, 5,790,056, 5,870,037, 6,297,753, 5,952,944, and 5,506,581

By this Amendment claims 1, 2, and 5-8 are amended to overcome the rejections under 35 U.S.C. § 112, second paragraph; and remarks are provided regarding each of the cited references.

These amendments were not made to distinguish over any cited art. Therefore, the amendments to claim 5 has not narrowed the scope of the claims within the meaning defined in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722 (2002). As amended Applicants respectfully traverse the rejections.

It is further respectfully submitted that the within amendments introduce no new matter within the meaning of 35 U.S.C. §132.

REJECTIONS UNDER 35 U.S.C. § 112, 2ND PARAGRAPH

The Examiner rejected claims 1-10 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Specifically, in claim 1, the Examiner found that there were no method steps provided in the body of the claim to support the method claim. In claim 1, the Examiner found that there were no structural limitations provided in the body of the claim to support the apparatus claim. The Examiner found that claim 7 does not provide structural limitations to constitute an apparatus claim. Claims 2-4, 6, and 8-10 were rejected for the same reasons applied to their respective base claim.

RESPONSE

As amended, Applicants respectfully traverse the rejection.

There are two separate requirements set forth in 35 U.S.C. § 112, 2nd paragraph:

(A) the claims must set forth the subject matter that applicants regard as their invention; and

(B) the claims must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant.

It is respectfully submitted that the claims now comply with 35 U.S.C. § 112, 2nd paragraph.

Claim 1 has been amended to recite appropriate language according to the method claim.

Claim 5 has been amended to recite appropriate language according to the apparatus claim.

Claim 7 has been amended to recite appropriate language according to the apparatus claim. It is to be noted that Applicants spontaneously amend parts of claims 2, 6 and 8 to particularly point out and distinctly claim the subject matter of the present invention by amending "..., and the DSV control in performed," to recite --...while the DSV control is performed--.

Applicants submit that all of the claims set forth the subject matter that applicants regard as their invention; and particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 112, 2nd paragraph be withdrawn.

CITED REFERENCES

With regard to the U.S. Patents cited by the Examiner as those which are directed to a similar subject matter as compared with the claimed invention, Applicants have the following comments.

The feature of the present invention resides particularly in that a synchronous pattern includes part of the following code word (see Figure 13; page 17, line 13 to page 18, line 24, particularly page 18, lines 12-24).

Conventionally, a synchronous pattern is independent of a code word. In contrast, according to the present invention, a synchronous pattern including part of the following code word is generated. Since a synchronous pattern including part of the following code word is generated, possible patterns of a specific code for identifying the position of a synchronous signal in one sector can be increased and thus, accuracy in detecting a synchronous frame is improved.

Additionally, the feature of dependent claims 2, 4 and 6 resides in that a specific coding table and another specific coding table of a plurality of coding tables are allotted to have the even/odd relation (see Figure 1; page 17, line 13 to page 18, line 24, particularly page 17, line 34 to page 18, line 11). Furthermore, claim 4 recites that the run length restriction rule sets a minimum run length of a signal of the code words at 3T and a maximum run length at one of 11T, 12T, 13T and 14T.

Hayami (U.S. Patent No. 6,297,753) discloses an eight-to-fifteen modulation using no merging bit and optical disc recording or reading systems based thereon. Hayami is a patent that has the same assignee as the assignee of the present invention. This patent does not disclose a method of generating a synchronous signal as recited in claims 1-10 of the present invention.

Nonaka et al. (U.S. Patent No. 5,952,944) discloses a modulation device and demodulation device and methods of the same. The patent discusses an ASV control method in which DVS control bits to be inserted are controlled. This disclosure is different from the DSV control method according to claims 1-10 of the present invention in which a pattern is selected from patterns having an even/odd relation. Further, the method in Nonaka et al. is not at all related to a method of generating a synchronous signal as discussed in the instant invention.

Okazaki et al. (U.S. Patent No. 5,870,037) discloses a method and apparatus, demodulating method and signal demodulating apparatus. The 8-16 modulation described in Okazaki et al. uses a sub-table for ASV control. However, the table constitution, DSV control method, and sequence thereof are different from those of claims 1-10 of the present invention. The method in Okazaki et al. is not at all related to a method of generating a synchronous signal as discussed in the instant invention.

Schouhamer Immink (U.S. Patent No. 5,790,056) discloses a method of converting a series of m-bit information words to a modulated signal, method of producing a record carrier, coding device, device, recording device, signal, as well as a record carrier. This patent discusses an 8-16 modulation using a sub-table for ASV control. The table constitution, DSV control method, and sequence thereof are different from those of claims 1-10 of the present invention. The method in Schouhamer Immink is not at all related to a method of generating a synchronous signal as discussed in the instant invention.

Sako et al. (U.S. Patent No. 6,215,750) discloses a data recording/reproducing apparatus and method corresponding to a plurality of data formats, and data recording medium. In this reference, a data block constitution is described including a synchronous signal and an error correction code, which is different from claims 1-10 of the present invention.

Ino (U.S. Patent No. 5,506,581) discloses a modulating method, modulating device and demodulating device. This reference discusses a DSV control method in which a 2-7 modulation is performed and a pattern for the DSV control is inserted at a predetermined interval. This is different from claims 1-10 of the present invention.

In view of the above, Applicants respectfully submit that the present claims define over the above references, taken either alone or in combination.

CONCLUSION

In light of the foregoing, Applicants submit that the application is in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants

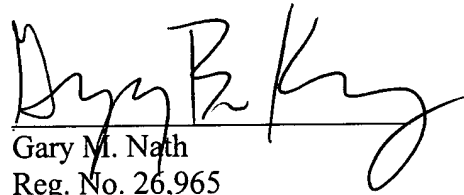
respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

Respectfully submitted,

NATH & ASSOCIATES PLLC

October 13, 2004

NATH & ASSOCIATES PLLC
1030 15th Street, N.W.
6th Floor
Washington, D.C. 20005
Tel: (202) 775-8383
Fax: (202) 775-8396

A handwritten signature in black ink, appearing to read "Gary M. Nath", written over a horizontal line.

Gary M. Nath
Reg. No. 26,965
Gregory B. Kang
Reg. No. 45,273
Teresa M. Arroyo
Reg. No. 50,015
Customer No. 20529